## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 2,3, and 4 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In Claim 2, " timing mechanism" in line 8 is not described in the specification. . Examiner will interpret the "timing mechanism" as timing assembly. In Claim 3, "plunger mechanism" in line 11 is not described in the specification. In Claim 4, "timing mechanism" in line 8 is not described in the specification.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (U.S. Patent 5627419) and further in view of Pankratz (U.S. Patent 4517477).

5. Miller discloses in Column 2 Paragraph 4 lines 33-44, a rotor attached to a shaft t having a plurality of rotor magnets with a drive magnet hub (stator) that can be located inside the rotor and is laterally moveable onto and out of the rotor along the shaft in order to control the angular torque caused by the electromagnetic force. However, Miller does not disclose a drive magnet hub having a plurality of drive magnets and magnet coils wound around the magnets.

6. Pankratz illustrates in Figure #6 a drive magnet hub (stator) having a plurality of drive magnets (stator magnets) (72) with magnetic coils (73) being wound longitudily, the force field of the drive magnet (stator magnet) can be nullified by passing electrical current through the magnetic coil that is encasing the magnet.

7. It would have been obvious to one skilled in the art to combine the reference of Miller with Pankratz in order to nullify by passing electrical current through the magnetic coil that is encasing the magnet.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miller (U.S. Patent 5627419) and further in view of Pankratz (U.S. Patent 4517477) and Jines et al. (U.S. Patent 3469130).

9. Miller discloses in Column 2 Paragraph 4 lines 33-44, a rotor attached to a shaft t having a plurality of rotor magnets with a drive magnet hub (stator) that can be located inside the rotor and is laterally moveable onto and out of the rotor along the shaft in order to control the angular torque caused by the electromagnetic force. However, Miller does not disclose a drive magnet hub having a plurality of drive magnets and magnet coils wound around the magnets and a rotor having rotor magnets recharge plates mounted on opposite sides of the magnet.

10. Pankratz illustrates in Figure #6 a drive magnet hub (stator) having a plurality of drive magnets (stator magnets) (72) with magnetic coils (73) being wound longitudily, the force field of the drive magnet (stator magnet) can be nullified by passing electrical current through the magnetic coil that is encasing the magnet. However, Miller and Pankratz do not disclose a rotor magnet recharge plate around the poles of the magnet.

11. Jines et al. Illustrates in Figure #7 rotor magnets (54) with rotor magnet recharge plates (shield)(62 and 64) surrounding the magnet on opposite sides of the magnet poles, for the purpose of drawing the rotor further into a circular path of the desired course.

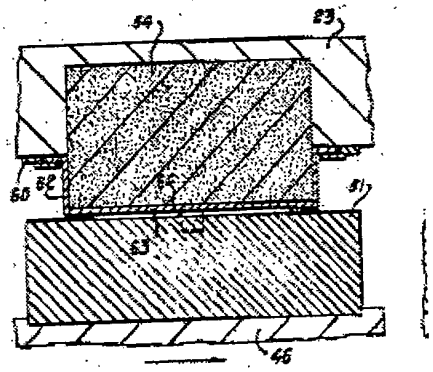

FIG. 7

12. It would have been obvious to one skilled in the art to combine the reference of Miller with Pankratz and Jines et al., in order to nullify by passing electrical current through the magnetic coil that is encasing the magnet and drawing the rotor further into a circular path of the desired course.

### *Allowable Subject Matter*

13. Claims 2,3,4, and 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Heba Elkassabgi whose telephone number is (703) 305-2723. The examiner can normally be reached on M-Th (6:30-3:30), and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

HYE
June 14, 2002